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Management by Geographical Area Vs. Functional Disciplines: A Comparison

A Two-Year Program

84

MANAGEMENT BY GEOGRAPHICAL AREA
VS.
FUNCTIONAL DISCIPLINES: A COMPARISON

A Two-Year Program

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EXECUTIVE SUMMARY

Prior to 1984 the field work on the Minarets Ranger District, Sierra National Forest, was accomplished through traditional functional disciplines. For example: employees in fire management prevented, located and suppressed fires as well as responded to law enforcement incidents; employees in recreation managed campgrounds, wilderness and informed the public of what there was to see and do; the timber section administered personal-use fuelwood cutting areas; and engineers opened, closed, repaired roads, and installed and maintained signs. This was an efficient system when funding was sufficient to maintain an adequate staff. Employees were well equipped, trained and proficient in their specific areas of responsibility, and therefore had time to accomplish objectives and provide needed service.

Significant budget reduction in terms of "real" dollars and personnel ceilings imposed on the District from Fiscal Year (FY) 1980 to FY 1983, resulted in a reduction of 1.7 person years available to accomplish field work. The concern over these reductions was compounded by predictions of further cuts in FY 1984. Fewer employees resulted in:

1) a reduced initial attack force,
2) a reduced opportunity for Forest visitors to have personal contact with an FPT,
3) increased failure of Forest visitors to comply with fire regualtions in backcountry camps,
4) increased trash along roads and in backcountry camps,
5) reduced compliance with camping regualtions,
6) an increased appearance of neglect in the backcountry,
7) increased damage to improvements through felling of trees by woodcutters,
8) an increase in the number of woodcutters not complying with the terms of their permit,
9) an increase in the number of woodcutters removing wood under the authority of the personal use wood permits, and then illegally offering the product for sale,
10) a continued problem with the timely opening and closing of gates,
11) a continued problem of removing obstacles such as logs and rocks from roads,
12) an increase in the number of signs needing replacement,
13) a continuing deterioration of existing signs,
14) prevention signs not being installed in backcountry areas,
15) reduced service to the public,
16) increased frustration of employees because of their inability to manage functions to the quality sustained in the past, and
17) increased anxiety of employees because of the potential for a forced move.

In FY 1984 the Minarets District was authorized to conduct an experiment to manage by Geographical Area (Management by Area). Employees were assigned areas and given the authority and responsibility for managing fire, recreation, personal-use woodcutting, signing, law enforcement and minor road maintenance. This was an attempt to find a more efficient way to manage the workload with fewer employees.

Even though the district experienced normal start up challenges associated with a new program, improvement occured in all functions except developed recreation and prevention signing. More improvement is expected in FY 1985.

Employees who filled the unit manager positions had the following observations:

1) all of the Unit Managers felt managing by area was more effective than the old system,

2) all but one Unit Manager felt he/she had more responsibility and authority than in the past and liked it!

3) all Unit Managers felt they had more work than could be done,

4) however, all but one Unit Manager felt more work was accomplished in 1984 than in the past,

5) four unit Managers felt they learned from the experience, three of those four said they learned a great deal,

6) all six expressed frustration over communications with other departments and within their own organizations,

7) all six expressed the need for more training, and

8) four of the Unit Managers felt their jobs were challenging and exciting.

It appears the "climate" is right for making a change to Management by Area. The desirability of decentralization and creating an atmosphere of creativity are being championed by Forest Service leaders . Management by Area is decentralization and helps people become creative.

District Rangers may wish to compare Management by Area with their present system to evaluate whether a change may assist them in maintaining good public service during this period of reduced budgets and manpower.

ABSTRACT

On December 12, 1983 the Minarets Ranger District was authorized to enact a two year experiment to administer fire prevention, developed recreation, dispersed recreation, personal use woodcutting, minor road maintenance, road signing, prevention signing and law enforcement by small geographical areas. Each area would be managed by one employee responsible for all activities.

Management By Area was compared to the past practice of Management By Function. Improvements were made in all functions except developed recreation and prevention signing, despite less funding and reduced manpower. More improvement is expected in 1985. District Rangers may wish to compare Management By Area with their present system to evaluate whether a change may assist them in offering good public service during this period of reduced budgets and manpower.

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I. INTRODUCTION

The Minarets Ranger District of the Sierra National Forest is located in the geographical center of California. The headquarters is in North Fork, a small community of approximately 2500, 45 miles northeast of Fresno (see map page 2). The southeast corner of Yosemite National Park and the northern boundary of the Minarets Ranger District share a common boundary (see map page 3).

There are a slightly over 300,000 acres within the District of which 25,000 acres are privately owned. The elevation varies from 1000 feet along the San Joaquin River to 13,000 feet at the summit of Mt. Ritter (Sierra National Forest 1978).

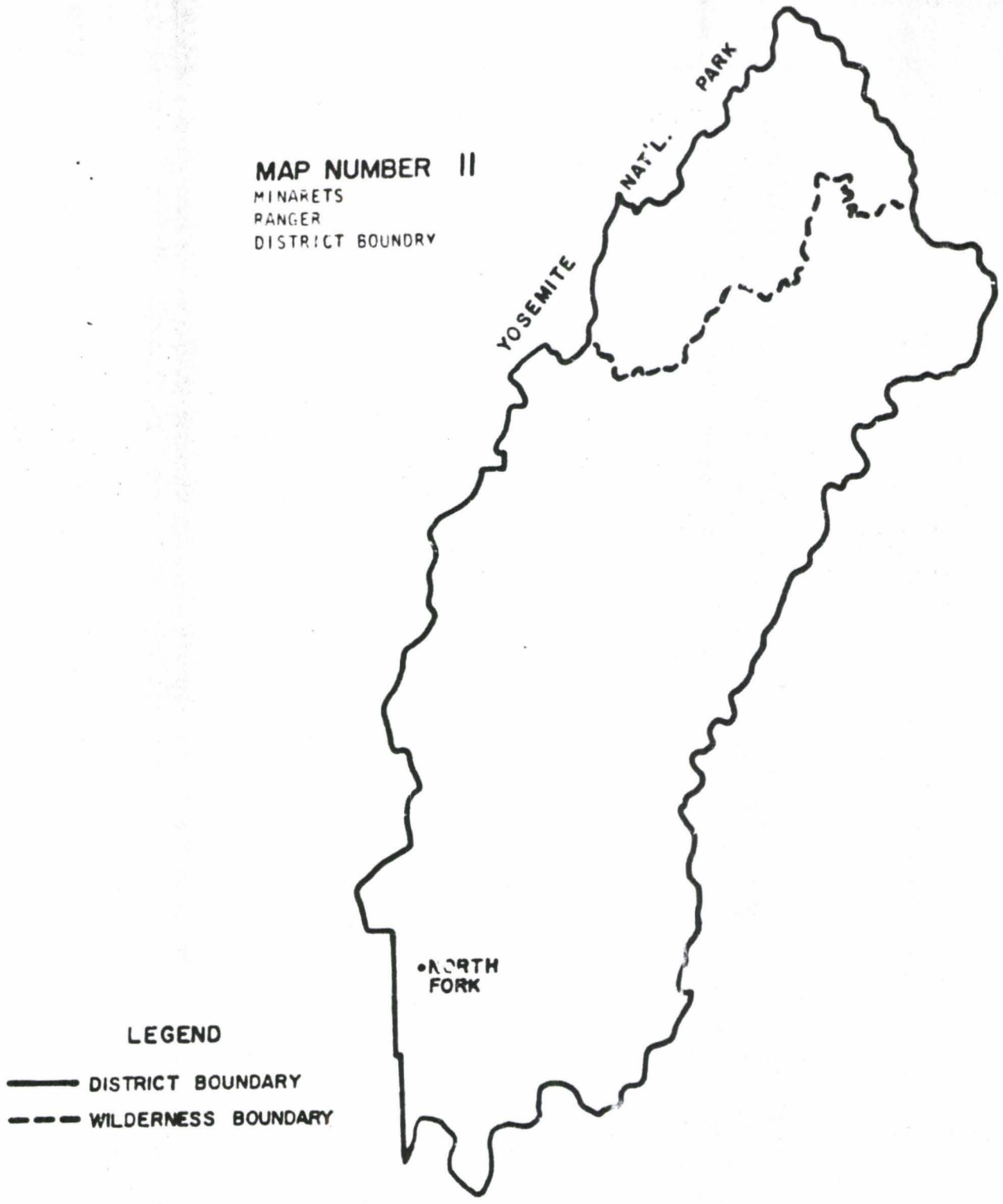
Prior to 1984 the field work in the District field work was accomplished through traditional functional disciplines. For example: employees in fire management prevented, located and suppressed fires as well as responded to law enforcement incidents; employees in recreation managed campgrounds, wilderness and informed the public of what there was to see and do; the timber section administered personal-use fuelwood cutting areas; and engineers opened, closed, repaired roads, and installed and maintained signs (Sierra National Forest 1978-1983). In the author's opinion, this was an efficient system when funding was sufficient to maintain an adequate staff. Employees were well equipped, trained and proficient in their specific areas of responsibility, and therefore had time to accomplish objectives and provide needed service.

However, significant budget reductions in terms of "real" dollars and personnel ceilings imposed on the District from Fiscal Year (FY) 1980 to FY 1983, resulted in a reduction of 1.7 person years available to accomplish field work. The concern over these reductions was compounded by predictions of further cuts in FY 1984 (See tables 2 & 3 on page A-3 in the Appendix). Fewer employees meant work and services provided in the past could not be maintained using existing methods.

In FY 1984 the Minarets District was authorized to conduct an experiment of Management by Geographical Area (Management by Area). Employees were assigned areas and given the authority and responsibility for managing fire, recreation, personal-use woodcutting, signing, law enforcement and minor road maintenance. This was an attempt to find a more efficient way to manage the workload with fewer employees (Sierra National Forest 1984).

The purpose of this thesis is to evaluate this experiment by comparing the differences in results between the old and new organizations in the functional areas of fire prevention, developed recreation, dispersed recreation, personal use fuelwood cutting, road management, sign management, law enforcement, service to the public and the effect on employees. In addition, a section will include recommendations for initiating a similar system elsewhere, based on experience gained in the Minarets Ranger District in 1984.

MAP NUMBER I
VICINITY MAP


MAP NUMBER II
MINARETS
RANGER
DISTRICT BOUNDRY
YOSEMITE
NAT'L.
PARK
NORTH
FORK
LEGEND
DISTRICT BOUNDARY
WILDERNESS BOUNDARY

IbI. LITERATURE REVIEW

The writer's original decision to pursue Management By Area rather than by function was made more out of the frustration of not being able to get things done with decreased budgets and manpower than careful, well documented analysis. Research for this paper was made to either substantiate, or disprove the soundness of this intuitively made decision, document the approval process, and research the "climate" for enacting change on other districts in the Forest Service. The Kepner-Tregoe Decision Analysis process was used to compare Management by Function with Mangement by Area and to predict future expectations.

To understand past results District records were reviewed including:

Sierra National Forest Approved Organization Charts FY 1978-1985
Minarets Ranger District Multiple use Plan
Minarets Ranger District Recreation Information Management Records FY 80-84
Minarets Ranger District Law Enforcement Records 1980-1984
Minarets Ranger District Fire Records 1978-1983
Minarets District Volunteers in Prevention Records 1983 & 1984

To supplement the information gained from records and to compare the old way with the new, District employees were contacted:

Berner	1985
LeFevre	1985
VanNatta	1985
Tranberg	1982
Podsiadlo	1984
Messerschmitt	1985
Lounsbury	1984
Zemon	1984

The approval process was based mainly on the records and documentation from approved organization charts and various meetings including:

Sierra National Forest Team Meeting, October 1983
Sierra National Forest Meeting, Forest Supervisor and Minarets District Ranger, December 1983
Sierra National Forest Approved Organization Chart, FY 1984

Management By Area emphasizes decentralization, creativity and the opportunity to develop champions. These characteristics are supported by both the private sector and the Forest Service including:

Leisz	1982
Smith	1984
Robertson	1982
Michalski	1984
McDaniel	1980
Klingenberg	1979
Waterman & Thomas	1983
Von Oech	1983
Garner	1985

Both interviews and personal contacts were made to develop this paper. The interviews were formal and documented. The personal contacts were more general and made to obtain observations and opinions and not documented in writing. Names of the individuals interviewed as well as those who gave general information are listed alphabetically in the first section of the Appendix.

III. SITUATION PRIOR TO 1984

A. Fire

The Minarets District has a moderate work load in fire prevention, detection, and suppression in comparison to other districts in the central Sierras (Berner 1984). Over the past five years there have been 88 man caused fires, burning 458 acres and 127 lightning fires, burning 29 acres for a total of 215 fires and 487 acres (see table 4 on page A-5 in the Appendix.) In FY 1980 the fire prevention work force included the Fire Prevention Officer (FPO) and five fire prevention technicians (FPT). The District, excluding the wilderness and high elevation roadless areas, was divided into five prevention units. Each FPT was responsible for preventing and suppressing fires on his/her unit (see map # 3 on page A-10 in the Appendix). Fire prevention involved the inspection of all residences and industrial operations to insure proper hazard reduction and personal contact with as many Forest visitors as possible.

The primary purpose of FPT's in suppression was to provide quick, initial attack on all fires in their unit. To be ready for initial attack, FPT's were trained, equipped, and positioned to quickly reach and put out fires.

By FY 1983 the fire prevention organization had shrunk to the FPO and two FPT's. The District, not including wilderness and roadless high country, was divided in half. Each FPT was responsible for the same work previously described, except there were only two, instead of five (see map #4 on page A-11 in the Appendix). This meant some residences and industrial operations could not be inspected. In addition, the opportunity for Forest visitors to have personal contact with an FPT diminished. Because of days off, three days per week, there was only one FPT on duty. If an FPT went off-Forest (on a fire or was sick) there were days when no Forest Officer was in the field with fire prevention duties.

Knowing how thinly spread his FPT's were, Prevention Officer VanNatta and his two FPT's recruited 25 Volunteers In Prevention (VIP's) to help spread the prevention message. These VIP's made hazard inspections in residential areas, participated in "Smokey the Bear Programs", contacted Forest visitors near residential and high use areas, and spoke to visitors in stores and other businesses during periods of high fire danger. In addition, the FPT's concentrated their efforts in areas with the highest fire hazard and the most use. Despite their efforts the personal touch of a Forest visitor being contacted by a Forest Officer and presented a prevention message was reduced significantly (Berner and Skovran 1983). In addition, prevention units were so large that FPT's were not considered a major source of manpower for initial attack because a fire could start as many as 40 miles from the FPT's location. In fact, it was common for an FPT not to be assigned to a District fire in order for him to keep patrolling to prevent or detect another start (Berner 1985).

B. Developed Recreation

Recreation use on the District is moderate. There are fifteen campgrounds, two boat launch sites, two vista points, and one campground designed to accommodate large groups that provides space for approximately 300,000 people during the year (Minarets Ranger District 1971). An average of 655,000 visitor day use on the District has occurred over the past five years (a visitor-day is one person staying for 12 hours). The most popular activity has been camping averaging 303,000 visitor days per year. Viewing scenery and traveling on roads and trails is the next most popular activity averaging 217,000 visitor days, while hunting and fishing has reached 75,000 visitor-days. Other popular activities include picnicking, resort and cabin use, swimming, water play, and gathering fuelwood (see table 5 on page A-5 in the Appendix).

Recreation administration was one of the responsibilities of the District Resource Officer. His recreation organization in 1981, included a Recreation Officer responsible for recreation and wilderness management, four permanent employees, seven temporary employees, and five volunteer campground hosts. These employees were divided between work in the wilderness, roadless high country, campgrounds and roaded dispersed areas. The campgrounds were well maintained. Each year after Labor Day, the permanent recreation employees formed a crew to work on major campground improvement projects. Over the years there was a gradual upgrading of facilities (LeFevre 1985).

Budget cuts in FY 1983 reduced the recreation work force to three permanent employees, four temporary employees, and four campground hosts. A crew was formed at the end of the season to work on major projects. Campgrounds were still maintained at a fairly high level.

It appeared funding for FY 1984 would support one permanent employee, two temporary employees, and three or four volunteer hosts working in the developed sites. The District would have been divided into workable units (see map #4 in the Appendix). It was felt the quality of campground maintenance would deteriorate, trash pick-up would be reduced to once per week, most toilets would be cleaned on a weekly basis and some would not be cleaned at all. The public would be relied on to pick up a share of the workload. It was felt a project crew could still be formed after Labor Day to work on an improvement project (LeFevre 1984).

C. Dispersed Recreation

Dispersed recreation management involves cleanup and maintenance of areas outside developed sites and areas of concentrated use. The primary activities involved camping, picnicking, fishing and hunting. Dispersed recreation management was normally accomplished by Recreation Technicians and FPT's. Their work responsibilities included answering questions, insuring compliance with camping and fire regulations, posting signs, preventing fires and picking up trash. To accomplish this in FY 1980, when there were five FPT's and several Recreation Technicians, a good percentage of Forest visitors in dispersed areas were contacted personally by a Forest Officer. Because of high visibility, visitors normally removed their trash and complied with camping and fire regulations. A reduction in FPT's from five to two resulted in their concentrating efforts in high use and high hazard areas. The reduction in Recreation Technicians resulted in their working in campgrounds and areas of concentrated use, which happened to be basically, the same area the FPT's were concentrating their efforts. Visitors to other parts of the District rarely came in contact with a Forest Officer. Trash began to accummulate along roads and backcountry camps. Evidence of extensive camping a few feet from streams was common. The backcountry took on an appearance of not being cared for (Berner and Skovran 1983).

D. Law Enforcement

Law enforcement involves gaining compliance with laws and regulations through awareness, warnings, and as a last resort, citations. The presence of a Forest Officer improves the likelihood a Forest visitor will follow regulations. When there was a full contingency of FPT's and Recreation Technicians, the normal procedures was as follows: the Recreation Technicians were to gain compliance in campgrounds and areas of concentrated use, and, except for the wilderness, the FPT's sought compliance over the whole District. It was expected that employees in other functions would also inform, warn, and cite visitors during the normal course of their work.

A review of law enforcement records shows however, that 90% of the citations, outside of the wilderness from 1980-1983, were issued by the Recreation Technicians and the FPT's (see table #6 on page A-6 in the Appendix). This fact was a little surprising since almost all field going employees received law enforcement training. It is possible, however, that because this expectation was not defined in their job description, there was no follow-through. Be that as it may, Recreation Technicians and FPT's supplied the bulk of the law enforcement efforts outside of the wilderness (Minarets Ranger District 1980-1984).

Cutbacks resulted in laws and regulations not being enforced except in campgrounds and high use areas where Recreation Technicians and FPT's concentrated their efforts (Berner and Skovran 1983).

E. Personal-Use-Fuelwood Gathering

Personal-use-fuelwood gathering was administered by the Timber Management Officer through a Small Sales Officer and an assistant. Their primary responsibilities involved selling small sales and designating areas for personal use woodcutting (Sierra National Forest 1982). In 1979, an FPT was financed with timber funds to improve woodcutter permit compliance. The Timber Management Officer did not feel the FPT was meeting his expectations and pulled the financial support after one season (Rich 1985). After 1979, on the ground administration of fuelwood cutting was minimal except for spot checks by FPT's contacting woodcutter in conjunction with their fire prevention responsibilites.

In 1982, a record 2,341 permits were issued, most during the last two weeks of September and October (see table #7 on page A-7 in the Appendix). The 1982 fire season ended on September 27 (Minarets District 1982) and the area FPT assigned other duties. This meant there was a record number of woodcutters and nobody in the field administering the program. Complaints began to surface. A woodcutter fell a tree across a stockdrive causing range permittee Herbert Jones to lose a day's work re-gathering cattle. Range permittee Jim McDougald complained that woodcutters fell trees across a fence and had blocked one of his stockdrives (Rich 1985). There was an anonymous tip that woodcutters were making a living using permits issued solely for personal use (VanNatta 1985). It appeared the District had lost control over the woodcutters, especially during the period from the end of fire season until snows made woodcutting areas inaccessible (Berner and Skovran 1983).

F. Roads

The Minarets Ranger District has 660 miles of roads, which include 92 miles that are paved and 568 miles which are dirt (see table #8 on page A-7 in the Appendix). The District Transportation Planner was responsible for road maintenance. His job was to plan the major road work for the Forest maintenance crew and to open and close roads. Gate management was an important feature of road management. It was important to close a road when the surface was soft to prevent damage. It was equally important to open a road, when dry, to permit use.

The Transportation Planner was responsible for making these decisions and special trips were needed to open or close gates. Often a gate would be closed when a road was dry and open while the road was wet. Roads closed by downed trees were particularly difficult to open. Usually the first work force, needing to travel a road in the Spring, would open it if they could not drive around the obstacle. If no one in the Forest Service needed access, a wood cutter or a member of the public would cut the logs or remove the obstacles. In areas of high fire danger, roads were opened by FPT's. Road maintenance crews removed slides or large obstacles not removable by hand. The only time culverts were cleaned was when there was an obvious problem, easily repaired, or it was accomplished by the Forest Maintenance Crew (Berner and Skovran 1983).

G. Directional and Informational Signs

There are approximately 500 directional and informational signs on the Minarets Ranger District. The District Transportation Planner was responsible for directional and informational sign installation, replacement and maintenance. The District did not receive funding for this work, and no one, except an occasional Older American, was available to accomplish it. After several years of little or no attention, directional and informational signing became deplorable. In 1983, an estimated 25% of the signs were missing, and many of those still standing were in dire need of attention. This was not just a District problem. On January 10, 1985, the Forest Engineer told the Forest's new Forest Supervisor that he would need to take a guide on the Forest because a person not familiar with the area could not get where he/she wanted by relying on signs (Sierra Forest 1985). This statement would have been true for the Minarets Ranger District in 1983 (Berner and Skovran 1983).

H. Fire Prevention Signing

There are approximately 250 prevention posters which need to be installed and maintained each year. The Fire Management Officer is responsible for this work. In 1980, when there were five FPT's, prevention signs and posters were well maintained, rotated to current applicable messages, and located in all strategic locations outlined in the District Prevention Poster Plan. Cutbacks resulted in prevention posters being placed only in areas of concentrated use and along main roads.

This lack of attention also resulted in the deterioration of the sign posts and backing for the prevention signs. Not only were the users of dispersed sites not receiving a personal contact with a Forest Officer, but they were not getting a prevention message through signing (Berner and Skovran 1983).

I. Service to the Public

Those from the public sector who visit the Forest expect clean, well maintained campgrounds; a feeling of being safe regardless of where his/her activities might take him/her, trash free roads and backcountry camps, traversable roads with good signing; a well run fuelwood program with plenty of easy-to-reach wood; and friendly Forest Officers available to answer questions and provide assistance in case of accidents, an inoperable vehicle or a forest fire (Rich 1985). For the most part, these services were being provided before the cutbacks. As noted in preceding sections, the cutbacks reduced manpower and the many services, which the public expected, were not supplied (Berner and Skovran 1983).

J. The Effect on Employees

The programs described in the preceding sections were managed by four Staff Officers who worked for the District Ranger. The Fire Management Officer managed fire prevention, law enforcement and prevention signing; the Resource Officer administered, developed and dispersed recreation; the Timber Management Officer managed personal use fuel woodcutting; and the Transportation Planner was responsible for road management and directional and informational signing. As cutbacks progressed and programs deteriorated, District staff and employees working in the field felt frustrated. At least three incidents support this conclusion. During the October 1981 staff meeting, it was declared that woodcutters had run rampant long enough and a unanimous decision was made to schedule two days for all employees on the District to patrol in order to contact as many woodcutters as possible to gain a measure of compliance. Bad weather cancelled the exercise but numerous employees expressed dissatisfaction over the manner in which the District was administering personal use woodcutting.

The second incident occurred in September 1982 at a District Staff meeting, when out of frustration, the Recreation Officer offered to accept responsibility for directional and informational signing, even though no funds came with the job. His offer was influenced by the opinions expressed by his Recreation Technicians and Campground Hosts, who were experiencing ever-increasing complaints from members of the public who became lost or disoriented. It was particularly frustrating because the employees could not even assure the public that improvements could be expected.

The next expression of frustration came in October 1982, when the District Timber Management Officer requested an additional employee to administer the removal of fuelwood by the public. This request came despite cutbacks in funding and portrayed the real feeling that something had to be done (Rich 1985). In addition, the cutbacks were reducing positions and some career ladders (Sierra National Forest 1983). So far it had been possible to absorb reduction through attrition and transfers, but the threat of being forced to transfer or retire early created anxiety (Tranberg 1982).

IV. THE NEED FOR CHANGE

When President Reagan took office in 1981, he promised to reduce the number of Government employees and spending. The Minarets District cuts of "real" dollars required the reduction of employees even below manpower ceilings. The FY 1980 budget for fire prevention, recreation, personal use firewood cutting and road maintenance was $212,032.00. The FY 1983 budget for the same items dropped to $198,361.00. If annual inflation averaged 6%, FY 1983 allocation represented a reduction of $64,559.00 in terms of "real" dollars (see table #3 on page A-3 in the Appendix). This cut required a reduction of 1.6 full time equivalent (one person working for a period of one year).

There was an anticipation of another 1.4 full time equivalent reduction by FY 1984 (see table 2 on page A-3 in the Appendix). The results of these cuts were discussed under the section "Situation Prior to 1984". However it may be helpful to summarize them:

1) a reduced initial attack force,
2) a reduced opportunity for Forest visitors to have personal contact with an FPT,
3) increased failure of Forest visitors to comply with fire regulations in backcountry camps,
4) increased trash along roads and in backcountry camps,
5) reduced compliance with camping regulations,
6) an increased appearance of neglect in the backcountry,
7) increased damage to improvements through felling of trees by woodcutters,
8) an increase in the number of woodcutters not complying with the terms of their permit,
9) an increase in the number of woodcutters removing wood under the authority of the personal use wood permits, and then illegally offering the product for sale,
10) a continued problem with the timely opening and closing of gates,
11) a continued problem of removing obstacles such as logs and rocks from roads,
12) an increase in the number of signs needing replacement,
13) a continuing deterioration of existing signs,
14) prevention signs not being installed in backcountry areas,
15) reduced service to the public,
16) increased frustration of employees because of their inability to manage functions to the quality sustained in the past, and
17) increased anxiety of employees because of the potential for a forced move.

V. ALTERNATIVE TO MANAGEMENT BY FUNCTIONS

The tentative FY 1983 budget received in October 1982 supported a recreation organization, not including wilderness, of one permanent employee, three temporaries, and four volunteer campground hosts. The Fire Prevention Organization included the Fire Prevention Officer, and 1.5 FPT's. Since there were two full time employees in prevention, the FPT's would need employment on other projects to make up six months of financing. Temporary employees and campground hosts, working in recreation, were scheduled to be terminated immediately after Labor Day. The permanent Recreation Technician would then join the two wilderness employees to form a work crew. The two FPT's would be assigned to a burn crew at the close of fire season, which normally ends the first week in October. This meant there would be no public contact employees working in the field after the first week of October.

During the summer, employees in Recreation would be assigned campgrounds, areas of concentrated use adjacent to the two major reservoirs, and a few of the most popular dispersed sites and overflow camps. The two FPT's would concentrate their efforts in areas of heaviest public use and highest fire hazard. A review of map 4 on page A-11 in the Appendix reveals the areas the Recreation Technicians worked were somewhat the same as the areas patrolled by the FPT's, yet a good portion of the District had no coverage. The District Timber Management Officer's proposal to add a timber patrol person increased coverage and overlap as well. It was conceivable a woodcutter camped in a popular dispersed site could have contact with three Forest Officers, each with a different purpose. Many other visitors had no chance of a personal contact because no Forest Officer had any responsibilities for being in that area. The likelihood of a Forest visitor coming in contact with a Forest Officer after the first week in October, anywhere on the District, was remote. The first week in October is the height of the woodcutting season and the middle of deer season (Sierra National Forest 1982).

It seemed there must be a better way to manage. The Timber Management Officer's proposal to add a timber patrolman prompted a discussion about making all possible funds available for on-the-ground management and placing as many employees as possible in the field to Manage By Area rather than function. To streamline and clarify communications, responsibilities, and authority, the organization would be administered by one Staff Officer. The advantages seemed to be that more Forest Officers could be placed in the field for a longer period of time, a simple far-reaching suggestion that needed further evaluation (Rich 1985).

The proposal was discussed at the November 1982 District Staff meeting and during informal discussions with most District employees. Many concerns were voiced, including: fear of loss of grade or reduced tour of duty, uneven balance of attention between functions, loss of fireman's retirement, and inequitable funding from the Forest. However, even with the lack of District support there appeared to be many advantages of managing by small areas including an opportunity to improve fire prevention, dispersed recreation, law enforcement, administration of the personal use woodcutting, road opening and closing, signing and service to the public without any long-term adverse effects.

On January 27, 1983, a memorandum was sent to the Forest Supervisor describing the advantages and concerns voiced by District employees of Managing By Area, under direction of one Staff Officer, rather than Managing By Function, under numerous Staff Officers. The purpose of this paper was to gain input and support.

In March 1983, the District Fire Management Officer and Resource Officer were asked to develop a Kepner-Tregoe Decision Analysis study to compare Management By Function with Management By Area. Both Staff Officers were opposed to changing from the current Management By Function procedure. The Kepner-Tregoe Decision Analysis (K-T D.A.), was a comprehensive analysis structured to allow detailed comparisons. The results of the K-T D.A. indicated substantial opportunities for improvement could be expected if a change was made from Management By Function to Management By Area (see pages A-8 and A-9 in the Appendix).

VI. IMPLEMENTATION

Implementation of the change to Management By Area would be a challenging process. District support was lacking. Once barriers at the District level were removed, the concept had to be approved by the Forest, and once done, followed by filling of positions and respective training.

A. District Support

The results of the Decision Analysis discussed in a previous section was a suprise to some employees who had not realized the potential of Management By Area. However, the proposal was still met with negative feelings, major concerns, and doubts of the outcome. The initial over-all feeling was, "The system works, why change it?" Also, it was not "just a system", but real people with lives and careers involved. In other words, the "gut level" was the fear of the unknown and "What is going to happen to me and my job?"

It was generally felt that added timber and engineering financing, along with increased responsibilities, would ensure all employees in recreation and fire prevention could be suitably placed in the new organization without loss of grade or reduction of tour. The latter objective could be demonstrated by showing the total available financing, and the development of an organization chart. Placement was needed for four employees who were working in recreation and fire prevention: the GS-9 Recreation Officer, GS-7 FPO and two FPT's. (The District Recreation Technician had retired.) In addition, the District's WG-7 Trail Inspector needed placement in the new organization because his position had not been funded in FY 1984 and future funding appeared unlikely.

The budget of $198,361.00 (see table #2 on page A-3) included Prevention, Recreation, Timber and Road Funds, which would support five full time positions and two employees with six month tours. This meant financing was available for the five permanent employees along with two long term experienced temporaries. The next step was to develop the organization to the point that it could be presented to the Forest Supervisor for approval. To avoid causing unnecessary anxiety, in case the proposal was turned down, names were not included for most of the positions. However, the proposed plan had to be detailed enough to show the Forest Supervisor how the organization would function.

Management By Area could be effectively managed by either the FMO or the Resource Officer. After completing the K-T D.A., both officers expressed an interest in managing the program. A review of their respective position descriptions with the Forest Personnel Officer pointed out the following:

1. Elimination of recreation maintenance and wilderness management from the Resource Officer's position would not affect his grade,

2. Removing prevention from the FMO would lower his grade from a GS-11 to a GS-10.

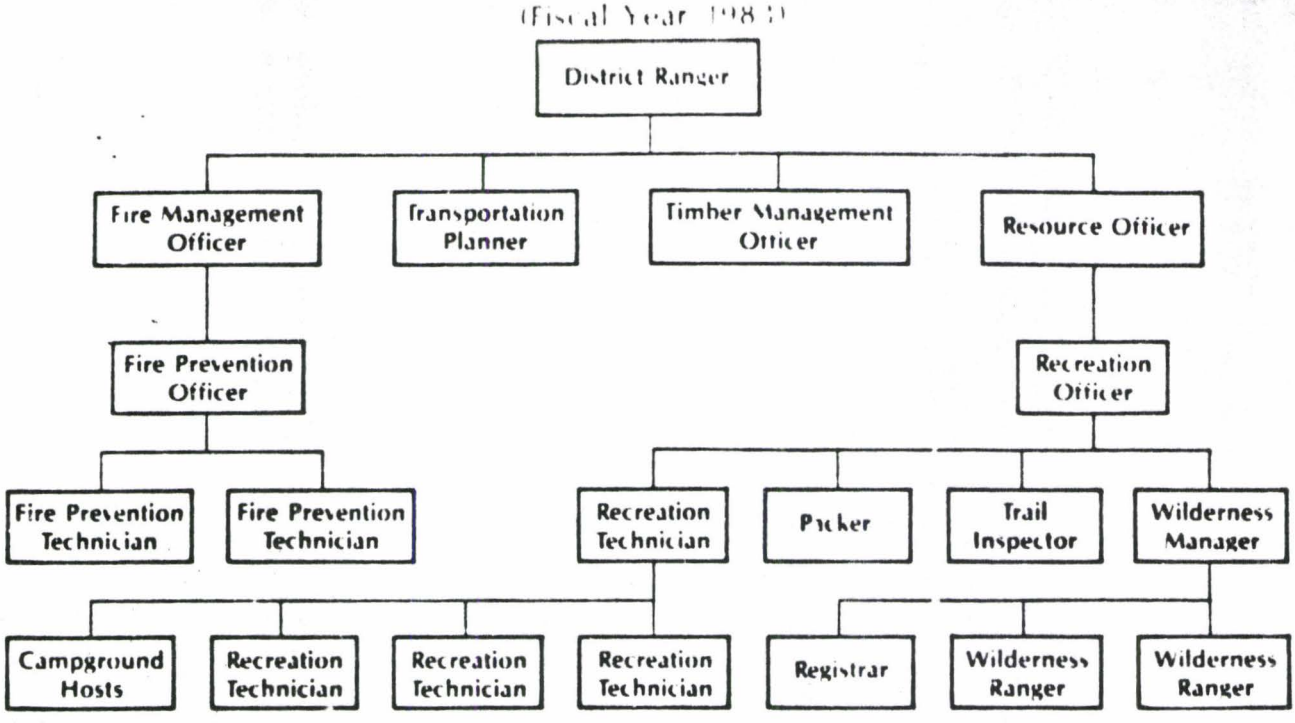
It was important not to reduce any employee's grade, therefore the program was placed under the FMO. The GS-9 Recreation Officer needed placement and he was the logical choice to fill the sub-staff position.

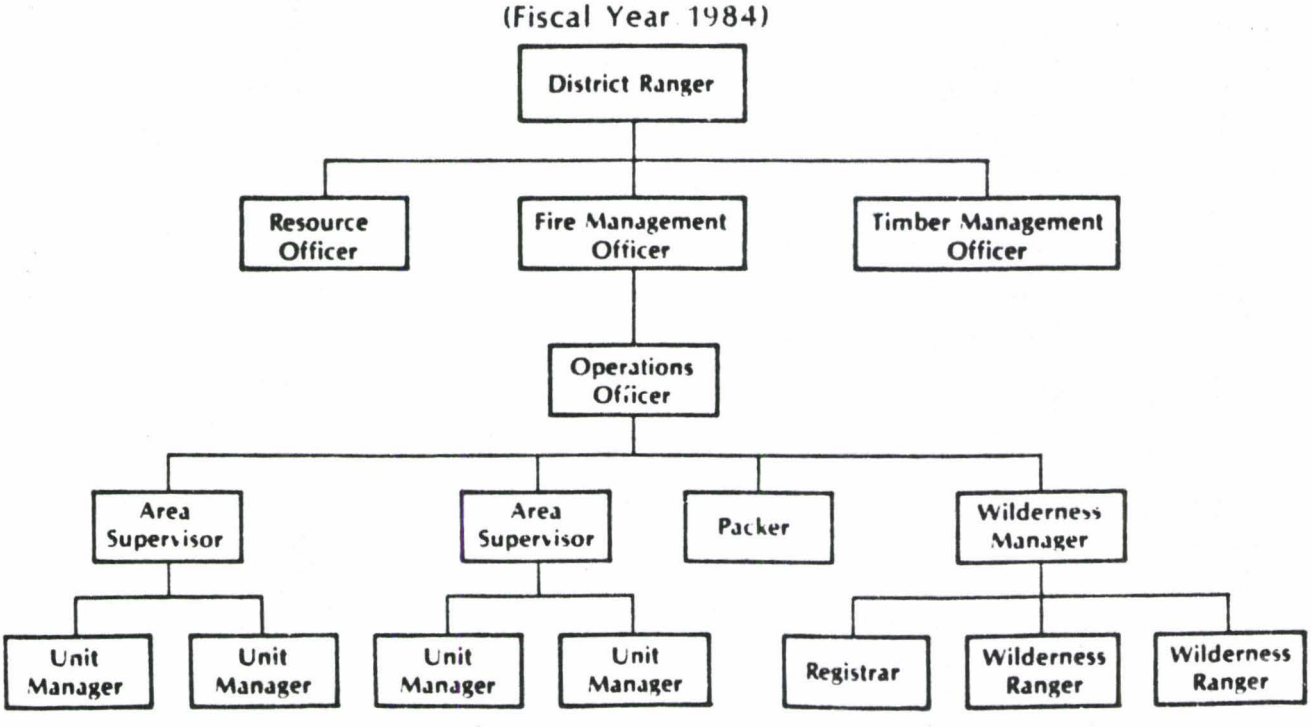
These two decisions helped insure there would be a balance of effort between functions, i.e, the FMO would emphasize the importance of prevention and the Recreation Officer would ensure recreation interests were maintained. In addition, it was felt the title of the sub-staff position should be neutral to avoid the appearance of favoritism. After much informal discussion with the employees involved, the sub-staff position became known as the Operations Officer.

Informal meetings with interested District employees were used to develop the organization chart. The first meeting resulted in all the area managers reporting to the Operations Officer. Wilderness was also one of his responsibilites. Thus, he would supervise six area managers (called Unit Managers), the Wilderness Manager and the District Packer. Concern was expressed that eight employees were too many for one person to supervise. Instead the group decided to divide the District into three broad units which included two roaded areas and the wilderness. The supervisors of the two roaded areas would be called unit supervisors. Each would be assigned small units and supervise two Unit Managers. The Wilderness Manager would be responsible for the wilderness, and Packer would continue to report to the Operations Officer because his pay scale was higher than the Wilderness Manager. Thus, the Operations Officer would supervise four employees, including two Unit Supervisors, the Wilderness Manager and the District Packer.

A comparison of the FY'83 and FY'84 organization shown on the next page may help the reader visualize the changes -

Figure 1 - Chart Comparing the FY '83 and FY '84
Ranger District Organization





District support was increasing. It became clear there would be positions available for all affected employees without loss of grade or tour. Unit boundaries were designated by the affected permanent employees (the two temporaries were not in work status) so work loads were distributed equitably. The issues remaining were, Fireman's Retirements and the assurance of continued funding from the Forest.

The FPO and two FPT's were eligible for Fireman's Retirement. It was decided they would need to be in units where the risk of fire was the highest. Fire would continue to be emphasized and other additional work minimized.

The concern for continued equitable funding from the Forest stemmed from the loss of identifiable functional positions. The Forest staff knows how many positions there are in his/her function on each District and tends to finance accordingly. Without identity there could be a tendency to give priority to functional positions on other districts knowing other sources of funds were available on the Minarets District. Vigilance toward the budgeting process, and good communications appeared to be the only strategy to counteract this very real threat.

Working through the concerns with the affected workers helped build support. Some employees openly supported trying the change. Others took a "wait and see" position while a few were still opposed.

B. Forest Approval

The Sierra Forest process for enacting an organizational change is made during the October Forest Team Meeting where unit heads present organization proposals for review, discussion and approval. Since there appeared to be initial support from key Forest staff during the presentation of the paper, no contact was made with them after February 1983. This proved to be a major tactical error.

During the October 1983 organization review, the Forest Recreation Officer and acting-Forest Fire Management Officer voiced concern that their function may not be served, commensurate with funding, under the new organization. The fireman's retirement issue was also raised and the District's solution to minimize other duties closely questioned. Concern was expressed that during a fire, campgrounds would not be maintained because all the unit managers would be fighting fire. Enough issues were expressed that the Forest Supervisor requested another meeting in December to review the proposal in more detail. This meant a two month delay. The questions and doubts also made it evident there was little Forest commitment to the proposal. This was important because several reassignments of personnel needed to be made in a timely manner if the organization was to be operational by the 1984 season.

During the December meeting the assistant Forest Personnel Officer determined that employees, covered under fireman's retirements, would continue to be covered provided: (1) they were assigned high fire danger units, (2) their primary duties were fire prevention and suppression, (3) their financing was predominantly from fire, and (4) the title of their position continued to be Fire Prevention Technician.

The Forest Supervisor approved the organization on a two year trial basis. The affected Forest and District Staff was to determine if functions were getting their money's worth, and if campgrounds continued to be maintained during emergencies. In addition, there were to be no promotions or increase in tours for employees in the new organization so that employees could go back to their original positions if the experiment failed (Stauber 1983).

C. Selection of Employees to Fill Positions

The Staff and GS-9 sub-staff positions were determined before the presentation to the Forest in order for the presentation to be effective. The remaining six assignments were not made to avoid unneeded disruption in case the new organization was not approved. The next step following Forest approval was to select employees to fill the positions. There were four permanent employees who needed to be placed, including the GS-7 Fire Prevention Officer, two GS-6 FPT's, and the WG-7 Trail Inspector, whose pay scale was about the same as a GS-6.

The FPO also was responsible for law enforcement coordination for the District. It was determined he should be the area supervisor for the southern units so he could be headquartered in North Fork for access to records and files. His unit would be Central Camp and he would supervise the management of the most complex units which were North Fork and Clearwater.

There were three District candidates for the other area supervisor position, including the two FPT's and Trail Inspector. It was decided to advertize District wide on an informal basis to conform with the previous decision to place all displaced District employees in the new organization. One of the FPT's was selected. Since the other FPT and Trail Inspector were GS-6 or equivalent, they needed placement in units which qualified as having GS-6 responsibilities under the supervision of the GS-7 FPO.

One of the FPT's was already assigned to the North Fork position and he was left in place with a smaller unit and more responsibilities. The Trail Inspector needed placement in the Clearwater Unit which was the only remaining GS-6 position. This was considered a form of conversion changing from wage grade to general service. It was directed that the position would be advertised Forest wide and hoped the Trail Inspector could be selected. If he was not, he would be placed on the Forest placement list because there were no other jobs available on the District.

This direction caused considerable delay and frustration. Luckily it was reversed at the last moment, and the employee reassigned non competitively. This experience is mentioned because it appeared to relate directly to the lack of Forest support for Management By Area evident at the October 1983 organization meeting (Rich 1985).

The other two unit manager positions were to be filled by experienced seasonals because of the Forest Supervisor's decision not to authorize extending tours. Thus, of the six units, three were filled with employees from Fire Prevention, one with experience in fire and recreation (Trail Inspector), one temporary with fire and recreation experience, and one temporary with wilderness experience. The employees with fire experience were assigned units with a higher fire work load and employees with recreation experience were assigned areas with more recreation (Sierra National Forest 1978-1984).

D. Training

All of the unit managers including the temporaries had extensive experience. It was felt on-the-job training, under the direction of the area supervisors, would be the most expedient method of training. On May 26, 1984 the six unit managers began their new jobs (LeFevre 1985).

VI. RESULTS AND POTENTIAL FOR MANAGEMENT BY AREA

Berner and Skovran rated past Management By Function and predicted results of Management By Area when they prepared their K.T. Decision Analysis in 1983. In January 1985, area supervisors VanNatta and Messerschmitt and Operations Officer LeFevre prepared a matrix comparing Berner and Skovran's 1983 actual and 1984 predicted results with actual results of Management By Area in 1984 and predicted improvement in 1985. The results shown in this matrix (Table 1) are the basis for analyzing how well Management By Area worked, and its potential.

Table 1

A COMPARISON OF RATINGS FOR FUNCTIONAL MANAGEMENT

Predicted vs. Actual Results of

Management by Area

Ratings are based on a scale of 1-10, 10 = Bo Derek

FUNCTION	Actual Rating Using Separate Rec/Fire Employees FY 1983*	Predicted Rating Using Unit Mgrs. made prior to "84" Season FY 1984*	Actual Rating Using Unit Manager FY 1984**	Predicted Rating Using Unit Managers FY 1985**
Fire Prevention	5	8	6	7
Developed Recreation	8	6	7	8
Dispersed Recreation	4	8	7	8
Law Enforcement	4	8	6	8
Personal Use Fuelwood	5	8	7	8
Road Management	2	6	4	7
Directional Signing	2	6	4	7
Prevention Signing	7	9	7	8
HOST Contacts (Service to Public)	7	9	9	9
TOTAL	44	68	57	70

*Berner and Skovran - 1983
**VanNatta, Messerschmitt, LeFevre - 1984

In general, Management By Area worked better than Management By Function, but not as well as Berner and Skovran predicted. However, the potential predicted by VanNatta, Messerschmitt and LeFevre is almost identical to the predictions made by Berner and Skovran (Table 1).

A. Fire Prevention

A great improvement in fire prevention was expected under the new system. After all there would be six employees making contacts instead of two. The expected personal contacts occurred as visitors, who had not personally heard a prevention message in years, were contacted one or more times in 1984. However, for various reasons, the VIP program reduced from 25 to fifteen, offset some of the gain (Minarets District 1984). A lack of "hands on" training in prevention was evident with three of the Unit Managers especially during the first part of the season (Unit Manager Meeting 1985). VanNatta, Messerschmitt and LeFevre felt there was potential for an improved prevention effort. Each Unit Manager could recruit his/her own VIP's and supplement their contacts significantly. Training should also increase efficiency and improve the "Quality" contact. In summary the new system was slightly better than the old, comparing 1983 and 1984, and there should be improvement in fire prevention in 1985.

B. Developed Recreation

It was anticipated the quality of campground administration would reduce slightly under the new system because some of the employees would avoid cleaning toilets and picking up trash. There was also the possibility a number of Unit Managers could be sent to fires, while under the old system, Recreation Technicians usually were not.

The actual results were a slightly better job of campground administration. The Unit Managers took pride in the campgrounds in their unit and part of that pride was making sure facilities were well cared for. In addition, they traveled to the more remote campgrounds more often and it was not a problem to stop and give them a good cleaning. The Unit Managers also developed a special rapport with the campground hosts that may have helped improve service in the main campgrounds (Table 1). An interesting note of trivia was that more plastic garbage bags and rolls of toilet paper were used in 1984 than ever before (Minarets Ranger District 1984).

While there was improvement in the day to day service, there were no major improvement projects accomplished because Unit Managers were either terminated, placed on woodcutter patrol, or assigned to burn crews at the end of the season. The overall assessment therefore was slightly reduced accomplishments in developed recreation sites, with improvement expected in 1985 as better organization and planning allowed time for project work (VanNatta, Messerschmitt and LeFevre 1985).

C. Dispersed Recreation

It was anticipated, and found to be true, that administration of dispersed recreation would improve significantly under the new concept. The main thrust of the Unit Managers was to get dispersed users to comply with fire regulations and pack out their trash. It is anticipated that dispersed recreation management will improve as Forest visitors become accustomed to seeing Forest Officers in out-of-the-way locations (VanNatta, Messerschmitt and LeFevre 1985).

D. Law Enforcement

It was felt the presence of six Unit Managers would encourage Forest visitors to comply with rules and regulations. In addition there would be a greater likelihood of a Forest Officer being more available to explain proper visitor behavior and discover, investigate and follow-up on violations (Lerner and Skovran 1983).

Improvement did occur. Unit Managers were more visible (Podsiadlo 1984) and Law Enforcement incidents were normally resolved in the unit by the Unit Manager as opposed to the past practice of FPT's traveling across the District to reach a reported violation. However, VanNatta, Messerschmitt, and LeFevre felt employees in other functions, such as Timber, did not make as many contacts or write as many citations because of a general feeling on the District that Unit Managers would resolve the Law Enforcement issues. Subsequent review of Law Enforcement records show however, the following citations and warnings issued by employees other than those in Fire, Recreation and Unit Managers:

1980 - 14
1981 - 20
1982 - 13
1983 - 10
1984 - 16

(Minarets Ranger District 1980-1984)

The records indicate more involvement than VanNatta, Messerschmitt, and LeFevre perhaps realized and maybe the results in 1984 were better than indicated in the matrix in Table I. VanNatta, Messerschmitt and LeFevre felt there would be improvement as all employees were encouraged to contact the public as they were encountered in the field (VanNatta, Messeerschmitt and LeFevre 1985).

E. Personal Use Fuelwood

It was anticipated the new system would improve fuelwood administration by providing more quality woodcutting areas, better signing and better enforcement. Great improvements were made as areas were opened and publicized. In general, woodcutters cut where authorized and there was a significant improvement in administration. There is room for more improvement as employees become better trained in Timber Sale procedures and Law Enforcement (VanNatta, Messerschmitt and LeFevre 1985).

F. Road Opening and Closing

It was anticipated that Unit Managers would open and close gates in a more orderly fashion and have access to a chainsaw for removing logs. Unit Managers would also keep culverts open and pitch rocks. The results were that most roads opened and closed in a timely manner, and logs were removed more promptly than before. However, some Unit Managers were not chainsaw qualified. They relied on another Unit Manager to do the work, which was somewhat inefficient. There was some confusion over levels of authority which caused unnecessary delays in opening and closing some roads. Few, if any, culverts were cleaned and there was a breakdown in passing on information to the Forest Road Maintenance Crew concerning some major culvert problems. The overall result of using Unit Managers in 1984 was a moderate improvement. As Unit Managers get more training, experience, and a better understanding of their responsibility and authority, there will be considerably more improvement (VanNatta, Messerschmitt and LeFevre 1985).

G. Directional Signs

It was anticipated each Unit Manager would install and repair at least fifty directional signs and get an inventory of sign needs. The actual results were that about fifty signs were installed, most of them on one Unit. Few sign needs were recorded, consequently some needed signs will not be made this winter. Even this modest accomplishment was an improvement. Potentially, the expectations of Berner and Skovran (1983) can be met but it will take training and organizing work priorities more efficiently (VanNatta, Messerschmitt and LeFevre 1985).

H. Prevention Signs

It was felt some Unit Managers signed all roads, dispersed sites, and trailheads properly while others missed areas never missed before. The net result was prevention signing did not change appreciably. Improvement is anticipated in 1985 because of defined standards, training, adequate supplies and more accessible equipment (VanNatta, Messerschmitt and LeFevre 1985).

I. Service to the Public (HOST)

The writer's definition of service included meeting the expectations of the public. However, Berner, Skovran, VanNatta, Messerschmitt and LeFevre viewed service as "the ability of the public to receive factual information." They reasoned there would only be a slight improvement in service because in the past the public could always travel to one of the three offices on the District to obtain any service they required. If the concept of service were expanded to include the following:

1) clean, well-maintained campgrounds,
2) a feeling of being safe,
3) trash-free roads and backcountry camps,
4) traversable roads with good signing,
5) a well-organized fuelwood program, and
6) friendly and available Forest Officers to answer questions and to provide assistance in the field.

Then perhaps considerable improvement was made in 1984 and more could be expected in 1985.

J. Employees Personal Thoughts About Management by Area

On October 5, 1984, Unit Managers, the Operations Officer, Fire Management Officer and myself met to review the program. Each Unit Manager was then interviewed to evaluate personal thoughts concerning the program. Because the Unit Managers came from a background of various job experience, their respective levels of job satisfaction differed. For instance, those who found themselves repeating work they had done a dozen or so years before responded with a lower sense of job satisfaction than those who were new to this level of responsibility and authority. The latter found the work new, exciting and challenging. The following observations are based on this meeting and the personal interviews:

1) all of the Unit Managers felt managing by area was more effective than the old system,

2) all but one Unit Manager felt he/she had more responsibility and authority than in the past and liked it!

3) all Unit Managers felt they had more work than could be done,

4) however, all but one Unit Manager felt more work was accomplished in 1984 than in the past,

5) four unit Managers felt they learned from the experience, three of those four said they learned a great deal,

6) all six expressed frustrations over communications with other departments and within their own organization,

7) all six expressed the need for more training, and

8) four of the Unit Managers felt their jobs were challenging and exciting.

It appeared job enrichment and a feeling of excitement occurred with the three less experienced employees. Two employees who had considerable experience were less enthused and one employee... "turned off". In summary the personal experience levels were:

Three Employees	Excellent Experience
One Employee	Moderate Experience
One Employee	Neutral Experience
One Employee	Negative Experience

K. Summary

Nine field work tasks were compared in the following time frame:

1) past results using the old system in FY 1983,
2) predicted results of using Unit Mangers in FY 1984,
3) actual results of using Unit Managers in FY 1984, and
4) predicted results of using Unit Managers in FY 1985.

Improvement using the new system was experienced in seven of the nine categories while prevention signing remained the same and there was a slight reduction in results in developed Recreation Management. Overall, improved benefits were experienced even though 1.4 fewer FTE's were used (see table 2 FTE's on page A-3 in the Appendix). Accomplishment did not reach Berner and Skovran's expectations (1983) however, their expectations were similar to those VanNatta, LeFevre and Messerschmitt expected in FY 85 (Table I). The greatest gain was through more personal contacts with the public in undeveloped areas. This improved management of dispersed Recreation, Fire Prevention, Law Enforcement, personal use woodcutting and service to the public. Management By Area led to Unit Managers taking pride in their area, resulting in improved signing and minor road maintenance. Improvement in FY 1985 can be expected through better organization, experience, and training.

VII. HOW TO PLAN AND OPERATE A SYSTEM OF MANAGEMENT BY AREA

A. Introduction

By now you probably realize there were portions of planning and operating the new Minarets program that were accomplished reasonably well and others that could be improved upon. The purpose of this section is to describe how a District Ranger could initiate "Management by Area" on his unit and avoid some of the frustrations and wasted time experienced on the Minarets. But first, let us consider the present "climate" in the Forest Service and the likelihood of success if a decision is made to enact a change.

> Doug Leitz, former Associate Chief of the Forest Service, described the likelihood of enacting change as a "Window of Opportunity." He said in a speech to Personnel Officers in Sacramento, California in 1982, "At different times I've thought through about how do you move something in the Agency, how do you bring forward something good that you might want to do? And I don't care whether it's a silvicultural practice, a higher order of integrated Personnel activity, or a new Range Management technique. How do you do that? You deliver it to the Forest Supervisor and you say, "We ought to do this," and you do it, just like that, don't you? No, it doesn't happen that way, does it? Think about the dynamics of a Forest, a Region, an Agency, a District, and what really happens with it.

Depends upon the people in that unit, really, doesn't it? And for me the organizational opportunity to bring forward new things and reach new heights ebbs and flows. Do you experience this in your job? There are opportunities to launch new programs if you're ready to do it when the energy situation allows it. Any Agency like the Forest Service is in a state of flux for opportunities. And you'll see a situation come along and you feel that you're really on top of the job, things are going well. That situation will last for a period of time and it flows away from you, doesn't it? Why, why does that happen? Well, maybe it's people change, maybe it's other pressures come in, but there are windows of opportunity to do things in an agency. These windows of opportunity are being competed against by all sorts of things: by new laws that come in and zap your time; by someone else's concept of doing this or that; by Departmental direction, by Washington Office direction, by Region, by Forest Supervisor's direction, the District Ranger's direction, and so forth. If you have your act together you can capitalize when those windows occur, and you can do great things in any organization.

Now, you cannot force those windows to occur, in my view, in my experience, but you can be watching for signs that they're there, and this is a fascinating aspect of organization dynamics which I think I could spend all morning with, and use some specific examples from my own experience. It's reasonable to expect that the chances to take and move a new concept forward is a timing question, is a communication question, and it's one of really having your planning done. Part of having your planning done requires that you know where you are, now."

It appears the "Window of Opportunity is wide open!" Management By Area places decision making at the lowest possible level. It offers an excellent opportunity for creativity and a chance to excel. Results are visible and comparable. The Forest Service as well as the private sector are recommending decentralization (Smith 1984, Robertson 1982, Micnalski 1984, McDaniel and Ashmos 1980 and Klingenberg 1979), management through Small Units (Anon 1983 and Waterman 1982), and instilling a creative atmosphere (Waterman 1982, Von Oech 1983 and Lattimer). At the March 17-20 Region 5, District Ranger Conference consultant, Pauline Garner, stated "The healthiest organization makes decisions at the lowest possible level". Management By Area is decentalization at the ultimate. The following steps may prove helpful if you decide to change to Management By Area:

(1) Making the decision
(2) Gaining support
(3) Gaining approval
(4) Organizing
(5) Training
(6) Supervision
(7) Follow-up

B. Making The Decision

1. Preliminary Decision

It is desirable but not essential for key employees to help make preliminary decision to Manage by Area. The District Ranger must determine prior to deciding a course of action whether staff are receptive to change. If the staff is "open" to change, hold a meeting to discuss the Ranger's evaluation of the quality and efficiency of past practices and the desirability of exploring a new and perhaps more efficient way of accomplishing the same tasks.

Have the group prepare a "Kepner-Trego" (K.T.) Decision Analysis (1973) or any other decision making process the unit head is comfortable with, to analyze the difference between results from past practices and expected results based on Managing by Area. The Manager should be prepared to "live" with the results, unless there is excessive bias in the process. If the decision appears close, or if the past practice appears to be a better program, do not attempt to change; drop the idea! If Managing by Area appears to be superior, proceed!

If the staff involved is not receptive to change, the District Ranger's task is more difficult because he/she will need to complete and defend all the numbers in the K-T D.A. matrix or the results of the selected Decision Making Process. Before the District Ranger sets a general meetin with the staff, he/she should review the Decision Analysis to ascertain the defensibility of all the calculations. The D.A. must consider whether there is a real need to change. If the analysis is close, or, or if the "old way" turns out to be better, drop the project. If the opposite is true, move forward.

2. Your Final Decision

(a) District Input

If the District Ranger's decision is to pursue making the change on the Unit from Management By Function to Management By Area, the next steps will be the same whether the District Ranger and his/her key staff arrived at a unified preliminary decision or if the District Ranger made an individual decision. Call a general meeting of all personnel involved. (In the Minarets' situation, this included the Timber Management Officer, Fire Management Officer, Resource Officer, FPT's, Recreation Technicians, and the Business Management Assistant.) Inform them that "you, or you and your staff" have completed a preliminary D.A., looking into a different method of management, and the preliminary results indicate a changeover would improve both efficiency and service. However before making the final decision, all involved employees will be given an opportunity to review the elements of the decision to ensure validity.

The next step, at this meeting, is to give an overview of the D.A., giving a description of the basis for the decision. Input from each individual present should be encouraged and recorded. Thirty days is suggested as the time to be given to the employees to seriously consider, think about, and provide input concerning the proposed change in management.

(b) Forest Input

Hold a joint meeting with either the Forest Supervisor or Deputy Forest Supervisor, the Forest Fire Management Officer, the Recreation Officer and perhaps the Timber Management Officer. Review the D.A. with them and seek their input. Give them 30 days, also, to respond to the proposed change. Once all the input is in, review it, individually, or with those who developed the D.A. to see if the decision is still valid. If the D.A. still supports making a change in management, contact all who provided input, giving them feedback as to the results. If at this point the District Ranger finds the origional Decision Analysis is invalid and no change is clearly supported, he/she should drop the proposal.

C. Gaining Support

Through the decision making process, the Ranger may have gained some support. Additional acceptance may have come through brainstorming and input. The Ranger may find that the ratio of participation of those whose future investment is involved and growing support is directly related.

1. Forest Support

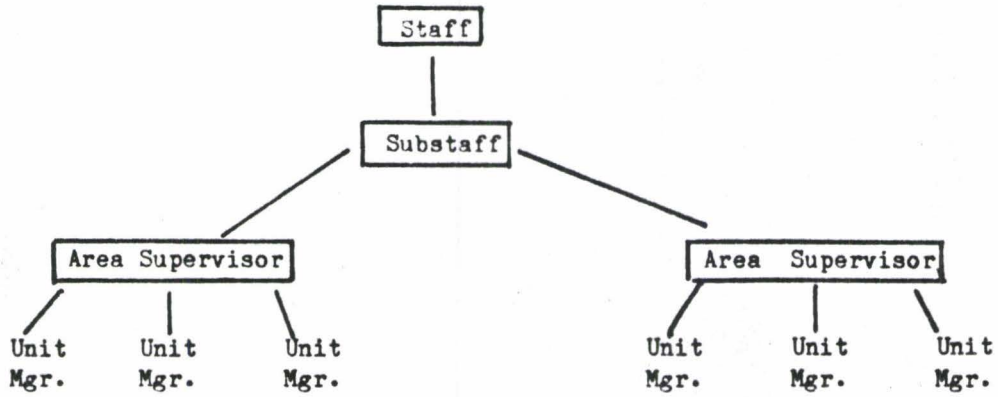
Support by key Forest Staff is critical because:

1) a few Staff Officers, opposing the change can become an effective obstacle to gaining the Forest Supervisor, and

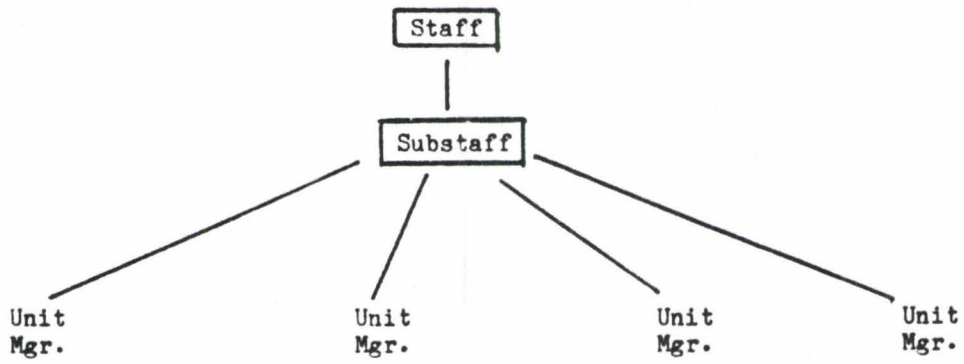
2) future funding can be directly affected by an unapproving Staff Officer because Unit Managers lose their functional identity, i.e., a Forest Recreation Officer may choose to finance a Recreation Technican on another District rather than a Unit Manager with no recreation identity. It appears the best way to gain support is to review the final D.A. with each of the Officers involved. The District Ranger should listen carefully to their individual comments and reasons as to why they agree or disagree with the numbers in the matrix. If the response shows that the Staff Officers are anxious to participate, they should be invited to all future meetings. If they do not wish to participate, the Ranger should meet with them on a regular basis, keeping them informed of the progress of the change. The Ranger should seek their advice and follow it, whenever possible. Let the Staff Officers get involved as much as they have the time and the interest, for ultimately, the will be involved in the decision.

2. District Employees

After the decision has been made to Manage by Area, it is advantageous to let those who will work in the organization make as many of the remaining decisions as possible. A meeting with emplcyees directly involved and interested Forest Staff should be organized to determine both duties and organization. Before the meeting, however, the Business Management Officer and Staff involved should calculate funds that are currently allocated to FPT's, Recreation Technicans, etc., to determine available financing. The group should "brain storm" all the duties the Unit Managers would perform. Once armed with all the available financing,it is appropriate to begin to develop a proposed organization chart. Do not put any names to any slots! The organization chart will probably look like this:



OR



Once the proposed organization is developed, review the duties and pare down or assign priorities if there are more tasks than the organization can complete.

Now, the Ranger and his team, need to determine who fills the proposed slots. Keep in mind the organization still needs to be approved by the Forest Supervisor. This step is the most emotional and must be done as openly and fairly as possible. It may be that only some of the slots can be filled at this time because formal advertisement is needed. However, enough slots need to be filled, or it needs to be organized such that the Forest Supervisor can see how the new organization will look. It would be impractical to formally advertise many of the positions because employees now in place must have somewhere to work.

The first position that needs to be determined is which Staff Officer should be responsible for the organization. This decision appeared to be a major stumbling block on the Minarets until it was determined that one Staff Officer might lose grade. This made the decision obvious. If grade is not a factor, the District Ranger should meet with the two or more Staff Officers and discuss the pros and cons of the decision. Each person should be assured of equal participation. This analysis should be circulated to Forest Staff and all employees on the District, giving 30 days for a response. A selection committee with at least one person from the Forest Staff. A tentative selection should then be made. If there is a question at the sub staff level, the District Ranger may need to go through the same process. This step has proven to be a very traumatic one for the employees involved due to a fear of displacement. It is better if only the Staff employees are involved at this point.

D. Gaining Approval From the Forest Supervisor

The next step is to approach the Forest Supervisor with the District proposal. On the Sierra, organizations are approved during the October Ranger/Staff Meeting. Other Forests have their own formats. Whatever means are provided it is important to know the concerns of the Forest Staff Officers and to be well prepared to address them. The process discussed during the preceding section should provide the means for support by all involved.

If there is sufficient evidence of a unified support and/or acceptance of the proposed change in management, not only will the Forest Supervisor approve the new organization, but Personnel and Procurement will recognize your project as a true Forest priority and make every effort to promptly approve position descriptions, more employees into positions and securing supplies and necessary equipment. If, despite all the District Ranger's efforts there is still considerable opposition, and he/she happens to be employed in the Pacific Southwest Region (Region 5), he/she should refer to the recent training opportunity championed by Regional Forester, Zane Smith, and attended by all the Forest Supervisors. Entitled, "Toward Excellence", the first session included a segment, "Encouraging Experimentation" (Stauber 1984).

The Ranger could point out that he/she wishes to use the Management By Area program as a two-year experiment. For purposes of this paper, it is assumed the Forest Supervisor has approved the proposed organization and it is time for implementation.

E. Organizing

1. Fill Positions

Once the organization has been approved, the Ranger should then begin making final position decisions. In most instances the employees needing placement are in the organization, and therefore some placements may be obvious. For example, if one of your jobs is a GS-7 and you only have one GS-7 position then that placement may be suitable. The FPT's need to fill the "high-fire" danger units to protect "Firemen's Retirement."

Firemen's Retirement is a key issue in Region 5. On February 5, 1985 Jerry Baughman, Supervisory Personnel Management Specialist in the Washington Office, considered the foremost expert in the Forest Service concerning fireman's retirement (Feuchter 1984) said, "Positions are covered under fireman's retirement when the primary purpose is fighting fire. These positions must be financed at least 51 percent from fire funds.

Secondary fire fighter positions require fire fighting experience but are more of a supervisory nature. They normally are GS-7's and above. In the Unit Manager concept, if the primary responsibility of the Unit Manager is to prevent and supress fires with the emphasis on "supress" and he/she is financed 51 percent through fire management, then the position should be covered by fireman's retirement. It is important to document, in the introduction portion of the position description, that the primary purpose of this job is to prevent and fight fire. The remainder of the position description should support this statement. Unit Managers working in high fire danger units and packing water should fit this description.

An informal/formal District only selection process should be arranged if more than one District employee is interested in a position. Candidates must have the same grade and tour as the position in the new organization otherwise the position would need to be advertised Forest wide and the District may face having a surplus employee if an off-District candidate is selected. Selection criteria for these positions should be developed and an unbiased selection committee make the selection.

District employees need to maintain good communications with the Forest Personnel Officer. In the case of the Minarets District, one employee needing placement was a Wage Grade (WG) rated Trail Inspector who needed a conversion to a General Service (GS) rating. This was accomplished non competitively. Placing employees must occur rapidly, which is enhanced if the Forest Personnel section is committed to your goals. This ties back to the importance of gaining support of the entire Forest Management Team through involvement in the planning process.

2. Supplies and Equipment

Concurrent with placing employees is the need to order supplies and equipment, and to secure and equip all needed vehicles. The Unit Managers should do this work. The following list may or may not fit another Unit's needs. (Van Natta, Messerschmitt 1985).

UNIT MANAGERS "TOOLS OF THE TRADE"
HAND BOOKS AND MANUALS

Powerline Fire Prevention Field Guide
Spark Arrestor Guide
Wildfire Investigation Handbook
Law Enforcement Pocket Guide
Prevention Field Guide
Prevention Plans for District, Unit, and Forest
Health and Safety Code
Thomas Brothers Map of California
Dictionary
Fish & Game Regulations
Forest Dispatch Plan
Forest Map

FORMS

Resident Fire Prevention Hazard Inspection 15-5100-08
Fire Prevention Hazard Inspection 15-5100-09
Risk and Hazard Inspection Record 15-5100-10
Logging Operation Fire Prevention Check List R-5-2400-198 9/76
Red Tag
Inspection Sticker/Decal
Burning Permit Books
Campfire Permits
Visitor Welcome Forms R-5-5100-215
Warning Notice FS 5300-1
Violation Notices FS 5300-4
Incident Cards - 15-5300-01
Evidence Tags
Vehicle & Pump Logs - FS 6500-60
Payroll Forms
Burning Permits
Incident Command Field Guide
Fire Line Note Book
Hazardous Materials Handbook

SUPPRESSION TOOLS

1 Shovel
1 Pulaski
1 McCleod
1 Canteen
1 Headlamp
Fire Pack -- personal gear
Personal protective clothing
Sierra National Forest Protective clothing kit
1 Signal mirror and compass
Porta desk
Flashlight
First Aid Kit (5 man) including blanket
Binoculars
Gauge, Pressure Tester
Hand Held Radio

INVESTIGATION KIT (FOR LEVEL III LAW ENFORCEMENT QUALIFIED EMPLOYEES)

Magnet
Magnifying glass 3"
25 Foot measuring tape
1 Roll flagging
Clipboard with pad of paper
Notebook
12" Square piece of fine screen
Sharp knife
Assortment of sizes of plastic bags and paper bags, plastic Vials, 2 paint jars, envelopes
Roll of Scotch Tape
3 Pens and Pencils
Camera with extra film and flash bulbs
Tweezers
Mini Cassette Recorder
String
Evidence containers
Plaster of Paris
Chain of custody tags

PREVENTION AND RECREATION PROJECT TYPE NEEDS

Assortment of Crescent wrenches
Screwdrivers (flat-philips)
Hand Saw - cross cut
Two pipe wrenches
Hammer
Spanner Wrench 1" to 1 1/2"
Staple gun and staples
Welding rod - - - Brass
Assortment of nuts, bolts, washers, and lag screws. (For signs and other repair).
Pliers
Chainsaw and gas/oil w/tool kit
Paint brush, paint and stain with solvent
Paint roller and tray
Battery cables
Tow chain
Hacksaw
Rations
Briefcase
Signs and Posters
Staple gun and staples
Grass rake/broom/disenfectent/fly spray/toilet brush
Post hole digger
Rock bar/tamper bar (Large)

F. Training

Don't short change training. On the Minarets, the decision was made to use on-the-job training. All six Unit Managers claimed this was an error during the season ending meeting on October 5, 1984. All Unit Managers agreed an academy type session would best suit their needs. This training should involve a specialist who would detail all the information Unit Managers needed to know about their particular subject. For example the Unit Managers recommended the District Timber Management Officer review the sales in the seven year plan, provide a map with current sales, discuss the logger who would log each sale along with name of the Sale Administrator. This also gives the Unit Manager an opportunity to tell the Timber Management Officer about specific needs such as contractor camp locations, and areas open or closed to wood cutters. Other training suggested by the Unit Managers included:

TIMBER

Seven-Year-Plan
Current Sales for the Year
Name of Operators and Sale Administrators
Training with Sale Administrator
Small Sales to be sold for the Year
Small Sales to be logged during the Year

MINING

Location of Mines
Name of Operator
Rules & Regulations Governing Operations

PREVENTION TRAINING---INSPECTION TRAINING

Basic Prevention (P140)
Prevention Planning (P240)
Forest FPT Workshop
Standards for Posting Signs and Posters
Prevention Inspections -- Types and How to Do
Safe Fire Practices
Basic Fire Investigation

FIRST AID TRAINING

Basic First Aid
Advance First Aid (optional)
Cardio Pulmonary Resuscitation (CPR)

VEHICLE & PUMP TRAINING

Basic Fire Fighter Training (Basic 32)

RECREATION TRAINING

Recreation Information Management
Care & Policing Standards
"HOST" Training

POWER AND HAND TOOL TRAINING

Chainsaw
Electric power tools
Carpentry tools
S Level II Refresher
Incident Reporting System

SAFETY

Job Hazard Analysis (JHA's)
Program Safety Policy
Boating Safety and Proper Handling

ROAD MANAGEMENT

Sign Standards
Road Standards

(Van Natta, Messerschmitt 1985)

G. Supervision

It is important to develop a good set of job standards and objectives. It is also important to outline clearly the levels of authority and responsibility (Podsiadlo 1984). These should be prepared jointly as soon as the employees are in position. One technique that may be effective would be for the Unit Managers, Area Supervisors, Operations Officer, and responsible Staff Officer to prepare a co-authored statement of the standards, objectives and priorities. This would help mold team work and ensure equal treatment. This trust factor is important because joining employees with entirely different values and backgrounds to the same team can cause friction. The goal is to develop a spirit of cooperation and helpfulness with some competitiveness.

Once the Unit Managers have worked a short time, the Area Manager should review the Unit to ensure objectives and standards are being met. During the first month the Operations Officer and Staff Officer should also spend time with Unit Managers. This is necessary to show support and ensure continuity between units. The Area Managers and Operations Officer should perform a midseason review. This follow-up will ensure "open" communications and "no surprises" at the end of the season.

H. Follow-up

It is important to schedule an evaluation meeting at the end of the season to discuss what was done well and what is needed for improvement. The District Ranger may or may not need to be involved but the Staff Officer and all his/her employees are necessary. Dialogue should be open and frank. A portion of the meeting may be set aside to bring in others who helped make the season successful, or not so successful, such as the Business Management Assistant or Timber Management Officer. Develop an action plan with assignments and due dates so the following season builds on the success and failures of the just completed season.

I. New Hires and Transfers

1) New Hires

Prior to filling a Unit Manager Position, applicants should be thoroughly coached about the responsibilities of the new position. Some employees may not realize they are required to accomplish all the "hands on" work such as cleaning toilets and law enforcement. It is important prospective employees know about the balanced workload and all that is expected before taking an assignment as a Unit Manager.

2) Transfers

Employees transferring from Unit Manager Position should be reminded of the change they can expect when they assume a traditional functional position. They have been used to assuming responsibility for everything in their area and may have difficulty staying out of another's area of responsibility.

VIII. CONCLUSIONS

Preparing this report has led the author to believe that Managing By Area has merit on many units with fire and recreation workloads such as those found in California. The fear that any function would be victimized by the other did not prove true in our case. The District experienced 57 fires in FY 1984, yet no complaints were received concerning unclean campgrounds. An inspection by the Forest Prevention Officer revealed that some FPT duties were not met which were attributed to the Operations Officer lack of training in prevention rather than a purposeful slight (Kohut 1984).

It appears the "climate" is right for making a change to Management By Area. The desirability of decentralization and creating an atmosphere of creativity are being championed by many Forest Service leaders (Leisz 1982, Robertson 1982, Smith 1984). Management By Area is decentralization and helps people become creative. Changing presents many obstacles. If further information, approved position descriptions, job standards, objectives, or training plans are needed contact the Minarets Ranger District, North Fork, CA 93643 or call (209) 877-2218.

IV APPENDIX

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Table 2

History of Full Time Equivalents Working in
Fire Prevention, Recreation, Personal Use Fuelwood, Administration
and Minor Road Maintenance on the Minarets Ranger District
Fiscal Years 1980-1985

	1980	81	82	83	84	85
Fire Prevention*	4.8	4.3	4.0	3.2	5.9***	6.0
Recreation**	3.3	3.9	3.9	3.3		
Personal Use Fuelwood Administrator	0.5	0.5	0.5	0.5	.2	
Minor Road Maintenance	0.5	0.5	0.5	0.5		
TOTAL	9.1	9.2	8.8	7.5	6.1	6.0

*Assumes Fire Management Officer spends 20% time in prevention
**Assumes Resource Officer works 30% in Recreation
***Includes 50% Fire Management Officer's in Recreation and Prevention

Table 3

History of Budgets in Fire Prevention, Personal Use Fuelwood,
Administration and Minor Road Maintenance on the
Minarets Ranger District
Fiscal Years 1980 -1984

FUNDS BY YEAR

Work Function	1980	1981	1982	1983	1984
Fire Prevention	$80,710	$74,680	$79,675	$78,630	$74,300
Recreation & Visitor Information Services	111,342	102,627	105,633	105,909	115,940
Personal use Fuelwood Administration	12,980	9,700	10,500	8,322	11,000
Minor Road Maintenance	7,000	4,800	7,500	5,500	3,960
TOTAL	212,032	191,807	202,308	198,361	205,200

Table 4

Fire History Minarets Ranger District
Sierra National Forest 1980-1984

Year	Man Caused	Acres	Lightning	Acres
80	22	370	33	6
81	20	18	44	10
82	13	3	10	3
83	9	7	7	0
84	24	60	33	10
TOTAL	88	458	127	29

Table 5

Recreation Use Per Visitor Days*
Minarets Ranger District
Sierra National Forest
FY 1980 -1981

	Fiscal Year/per thousand visitor days							
Activity	80	81	82	83	84	Total	Average	Average % of use
Viewing Scenery & Travel	190.6	200.9	240.3	230.1	223.7	1085.6	217.1	33.1
Swimming & Water Play	25.8	13.4	13.1	13.1	12.6	78.0	15.6	2.4
Fishing	40.2	52.6	51.6	41.8	50.6	236.5	47.3	7.2
Camping	389.4	396.9	265.3	230.1	234.6	1516.3	303.3	46.3
Picnicking	6.9	4.2	30.1	25.5	23.9	90.6	18.1	2.8
Resort & Cabin Use	7.4	7.4	7.4	6.7	7.6	36.5	7.3	1.1
Hunting	22.0	17.9	37.0	29.2	30.2	136.4	27.3	4.2
Gathering Firewood	4.5	21.5	21.5	17.4	15.8	80.7	16.1	2.5
Gaining Information & Viewing Exhibits	1.3	2.5	3.7	2.8	2.9	13.2	2.6	0.4
TOTAL	688.1	717.3	670.0	596.8	601.6	3273.8	654.8	100.0

*A visitor day is a one person stay for twelve hours.

Table 6

Violation and Written Warnings Issued By Function From 1980-1984 On The Minarets Ranger District

WORK FUNCTION		1980	81	82	83	84
Fire Prevention						
Violation		25	28	22	2	
Warning		81	4	56	26	
	TOTAL	106	32	78	28	
Recreation						
Violation		12	9	3	0	
Warning		19	0	2	2	
	TOTAL	31	9	5	2	
Wilderness						
Violation		0	8	4	5	2
Warning		1	2	4	4	9
	TOTAL	1	10	8	9	11
Timber						
Violation		0	4	1	0	0
Warning		3	1	0	1	5
	TOTAL	3	5	1	1	5
Fuels						
Violation		1	0	1		
Warning		3	0	1		
	TOTAL	4	0	2		
Fire						
Violation		1	1	1		
Warning		5	0	1		
	TOTAL	6	1	2		
Administration						
Violation		0	0	0		
Warning		0	4	0		
	TOTAL	0	4	0		
Unit Manager						
Violation		0	0	0		16
Warning		0	0	0		64
	TOTAL	0	0	0		80
TOTALS						
Violation		39	49	32	7	18
Warning		112	10	64	33	78
	TOTAL	151	59	96	40	96

Table 7

History of Personal Use Wood
Permits Minarets Ranger District
Sierra National Forest 1980-1984

Year	Number of Permits	Value
1980	1693	$35,955*
1981	1557	29,585
1982	2341	47,464
1983	1127	10,310**
1984	981	2,395**

*Estimated Value
**Actual dollars collected

(Sierra National Forest Timber Records -1984)

Table 8

ROADS ON THE
MINARETS RANGER DISTRICT

Arterial		
Two Lane Paved	65	miles
Mixed Surfacing	27	miles
Collector (Main Dirt Roads)	128	miles
Local(Single Lane Dirt Roads w/turnouts	440	miles
TOTAL ROAD MILES	660	miles

(Sierra National Forest-Transportation Information System [TIS] 1984)

DECISION ANALYSIS WORKSHEET - COMPARISON OF ALTERNATIVES

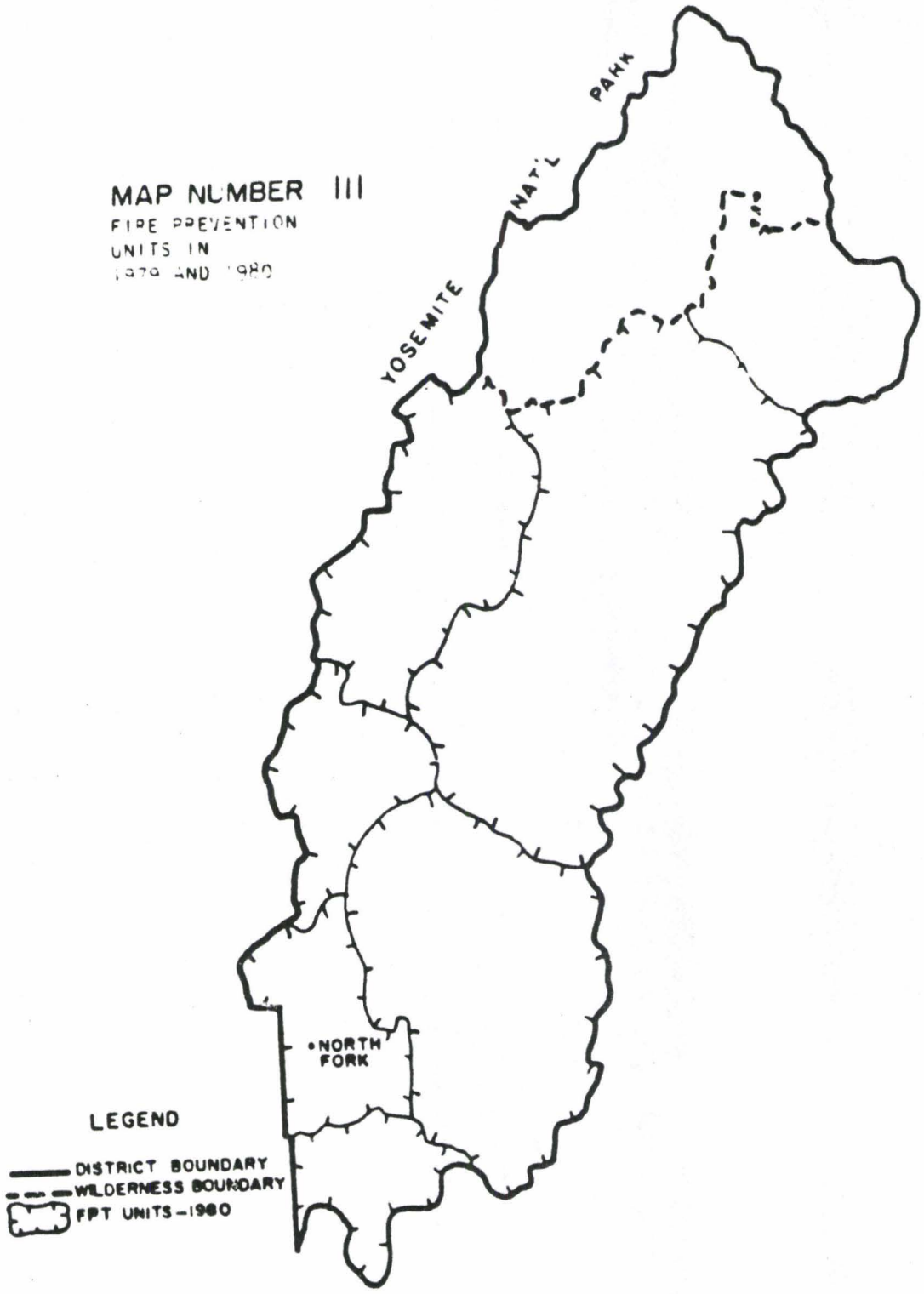
Decision Statement SELECT THE MANAGEMENT APPROACH FOR THE MINARETS R.D. AREA CONTROL

Objectives		Alternatives								
		A Current Organ. (FPT/REC)			B Unit Manager Concept			C		
Must		**Info**	**Go**	**No**	**Info**	**Go**	**No**	**Info**	**Go**	**No**
Protect Fire Fighter Retirement Of Esisting Affecte Personnel		Is Currently Protected	Go		Same as Alt. A.	Go				
Level II Law Enforcement Trained		Trained or Trainable	Go		Same as Alt. A.	Go				
Financing Available (Multi-functional)		Functional $ Avail.	Go		Same as Alt. A	Go				
Want	**Wt**	**Info**	**Sc**	**Wt Sc**	**Info**	**Sc**	**Wt Sc**	**Info**	**Sc**	**Wt Sc**
Provide dispersed recreation mgmt.	5	Done by FPT and Rec. Techs.	4	20	Be done by one person	8	40			
Have experienced personnel	7	No chg. in fire org. Exp. level fluctuates	5	35	No chg. in fire org. Inproved Rec. exp.	7	49			
Facilitate HOST contacts	9	Adequate	7	63	Should improve	9	81			
Maximize law enforcement efforts	8	Currently is marginal	4	32	Greater account-ability	8	64			
Have large work force avail. for projects	2	Current poor coordin-ation within areas	3	6	Better info. of work needs	5	10			
Use W.A.E. personnel for mgmt. of resources	6	Fire - No chg. Rec. - Seasonals	4	24	Fire - No. Chg. Rec. - Enhanced	8	48			
Provide Firewood Program control	6	Sporatic - Limited coordination	5	30	Defined - More consi-stnet control	8	48			
Assist in Range mgmt.	4	Infrequent contacts some info.	2	8	More awareness Greater info. levels	6	24			
Assist in Mining Claim adm	4	Infrequent contacts some info.	2	8	More awareness Greater info. levels	6	24			
Survey Roads; Do selected Rd. Maint. & Mgmt.	8	Now done by FPT	2	16	Will be done by all	6	48			
		TOTAL								

DECISION ANALYSIS WORKSHEET - COMPARISON OF ALTERNATIVES

Decision Statement SELECT THE MANAGEMENT APPROCAH FOR THE MINARETS R.D. AREA CONTROL

Objectives		Alternatives								
		A Current Organ. (FPT/REC)			B Unit Manager Concept			C		
Must		**Info**	**Go**	**No**	**Info**	**Go**	**No**	**Info**	**Go**	**No**
Want	**Wt**	**Info**	**Sc**	**Wt Sc**	**Info**	**Sc**	**Wt Sc**	**Info**	**Sc**	**Wt Sc**
Post signs for Fire Prevention	7	FPT only	7	49	More manpower to do job	9	63			
Create a career ladder	8	Poor - Rec Fair - Fire	7	49	More position avail. & additional grades	7	54			
Give job enrichment	7	Functionalized Good - FPT; Fair-Rec	5	35	Cross - Trainning Multifunctional	7	49			
Reduce Seasonal Hiring	6	None - Fire Use - Rec	4	24	None - Fire Reduce Seasonal - Rec	7	42			
Facilitate Fire Prevention contacts	8	Marginal due to area responsibilities	5	40	More people = more contact	8	64			
Minimize costs (Mileage for salaries)	8	More mileage, less vehicles, less personnel	8	64	Need more vehicles, personnel, reduce mileage	4	32			
Provide adequate camp-ground admin.	9	Adequate now	8	72	May get worse	6	54			
Provide consistent	9	Random - too much ground to cover	5	45	More selected coverage More thorough coverage	9	81			
		TOTAL								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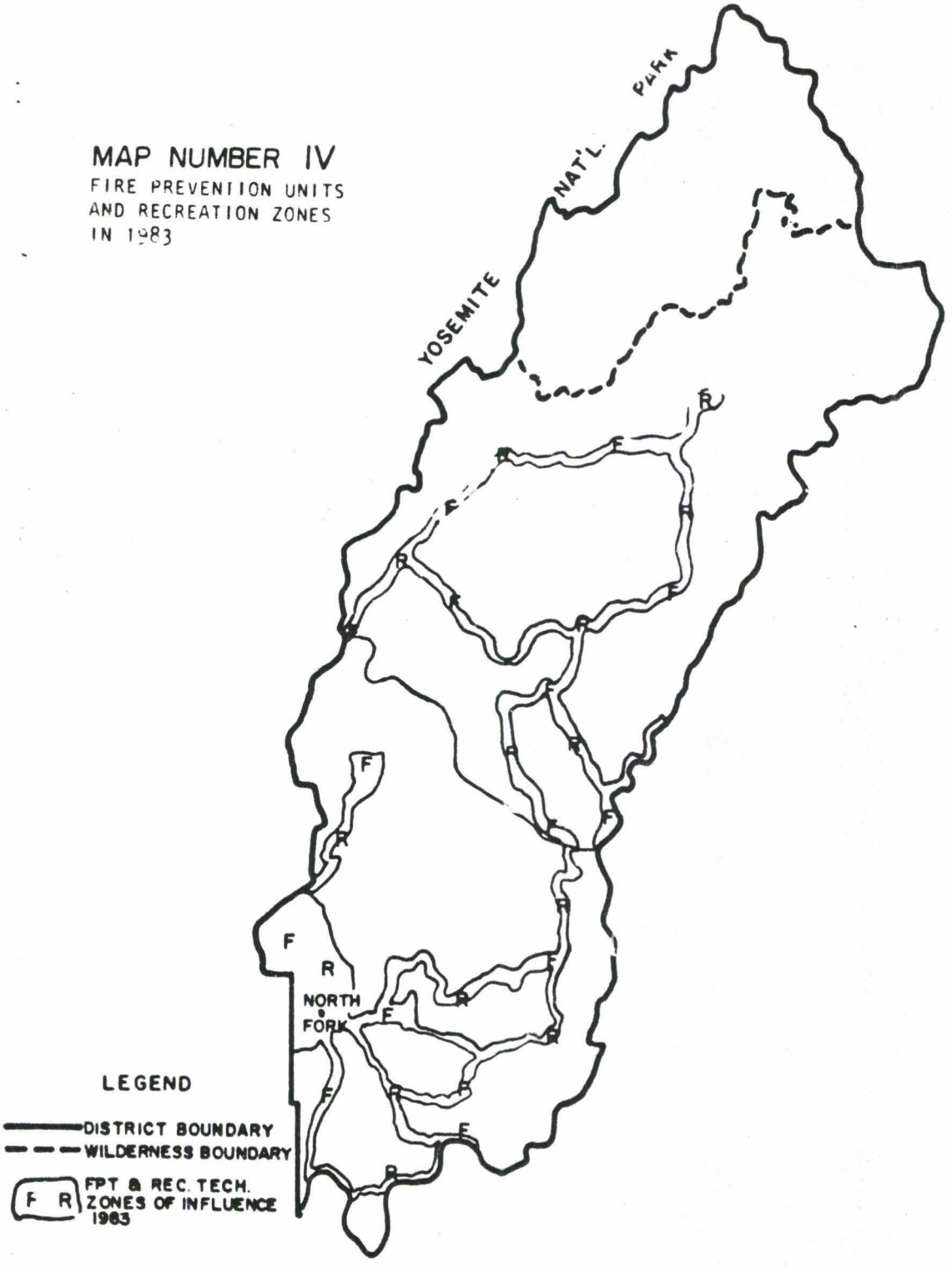
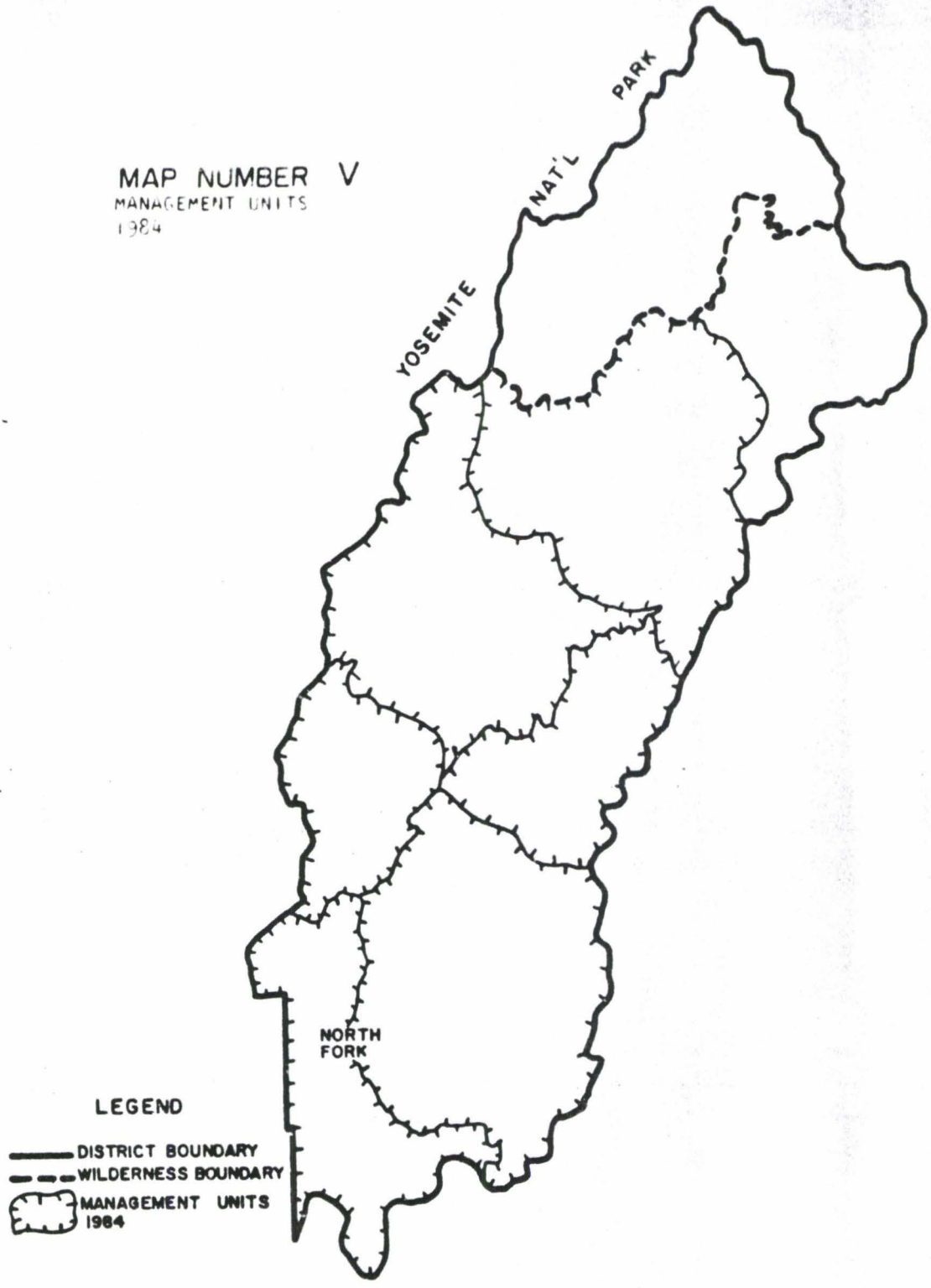
FIRE PREVENTION
UNITS IN
1979 AND 1980
YOSEMITE
NAT'L
PARK
NORTH
FORK
LEGEND
DISTRICT BOUNDARY
WILDERNESS BOUNDARY
FPT UNITS-1980

MAP NUMBER IV

FIRE PREVENTION UNITS
AND RECREATION ZONES
IN 1983

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MANAGEMENT UNITS
1984
YOSEMITE
NAT'L
PARK
NORTH
FORK
LEGEND
DISTRICT BOUNDARY
WILDERNESS BOUNDARY
MANAGEMENT UNITS
1984